State of California **California Natural Resources Agency**

M e m o r a n d u m

Date: June 17, 2015

To: Mark Holderman, Chief
South Delta Branch

Jacob McQuirk, Chief
Temporary Barriers and Lower San Joaquin
Bay Delta Office

From: **Department of Water Resources**

Subject: Revegetation Memorandum for the 2015 Emergency Drought Barrier Project

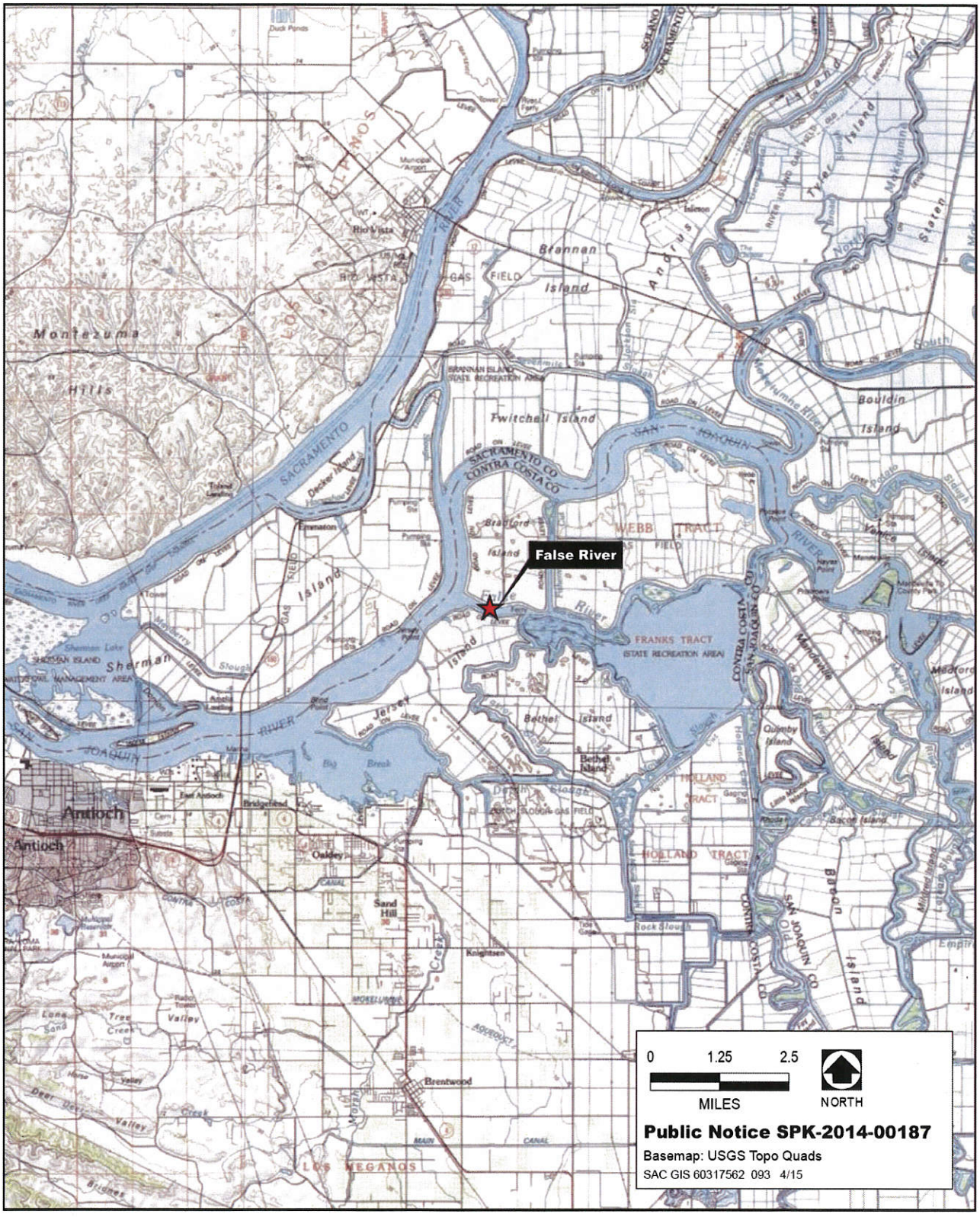
The purpose of this Memorandum is to provide information pertaining to revegetation activities for the California Department of Water Resources (DWR) 2015 Emergency Drought Barrier Project (Project). This Memorandum includes three sections–Introduction, Schedule, and Revegetation–as described below.

Introduction

DWR installed a temporary rock barrier at West False River in May/June 2015 to reduce the intrusion of salt water into the Sacramento River-San Joaquin River Delta (Delta) and reduce demand on reservoir releases. The West False River barrier is situated approximately 0.4 miles east of the confluence with the San Joaquin River, between Jersey and Bradford islands, in Contra Costa County, California (see Figure 1). DWR anticipates barrier removal would commence prior to October 1, 2015, and removal would be completed by November 15, 2015. As part of installation and removal activities, DWR would utilize approximately 1.95 acres of upland habitat for access, staging, and installation of king piles and sheet piles referred to as the Upland Disturbance Area (see Figure 2).

The Upland Disturbance Area consists of the Staging Area and "developed areas." The Staging Area, approximately 1.08 acres, is subject to revegetation and situated on the landside of the Jersey Island setback levee. The Staging Area is not located within the jurisdiction of the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code; U.S. Army Corps of Engineers (USACE) under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act; or State Water Resources Control Board (SWRCB) under Section 401 of the CWA.

Habitat within the Upland Disturbance Area but outside the Staging Area on both islands consists of rock riprap along the waterside slope and paved road on the levee crown. Because of the developed nature, DWR does not plan on revegetating these areas which may be within CDFW, USACE, and/or SWRCB jurisdiction.



Source: DWR 2015, AECOM 2015

Figure 1 **Location of Proposed Emergency Drought Barrier**

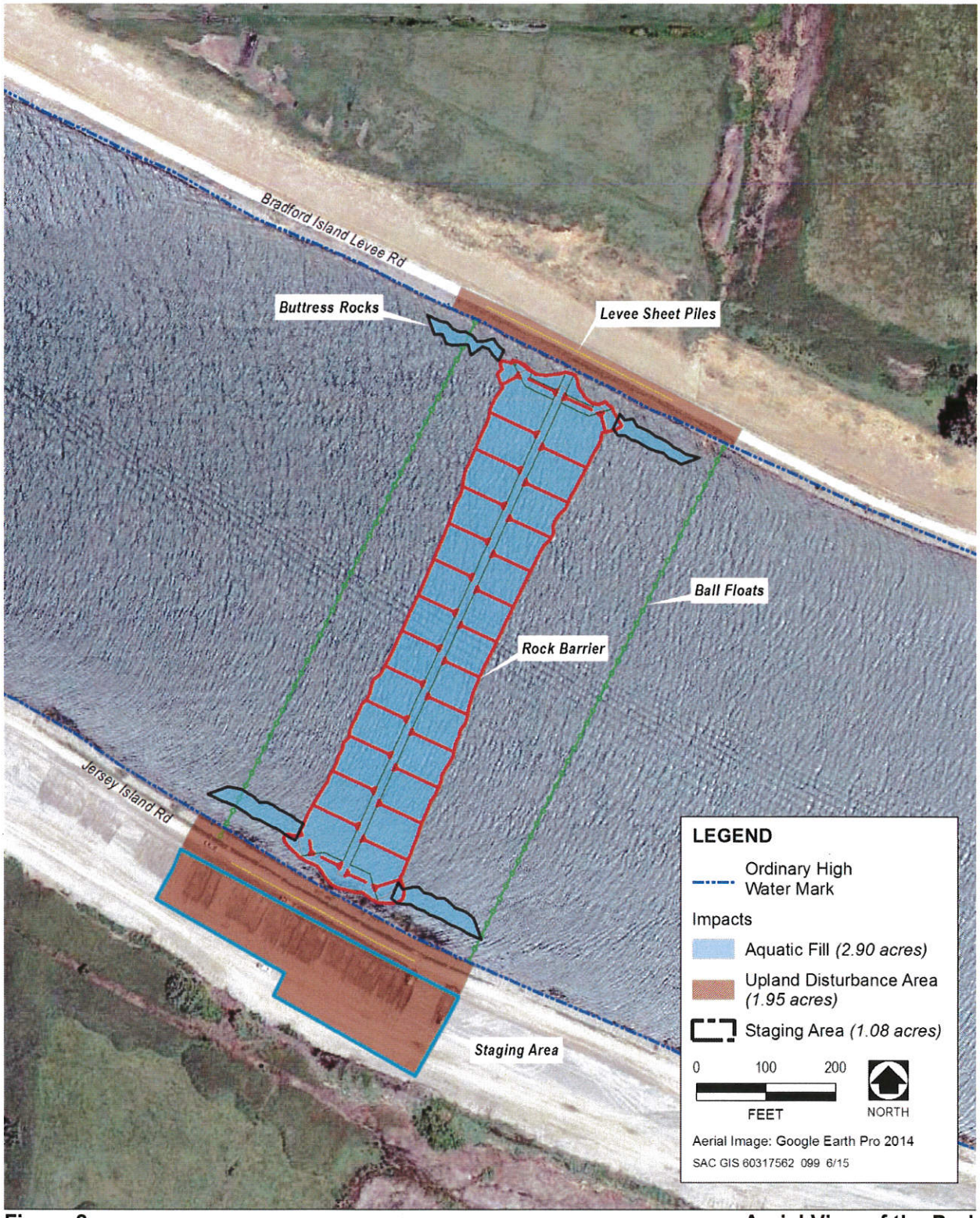


Figure 2 **Aerial View of the Project Site**

Schedule

Revegetation of the Staging Area at the West False River barrier site would occur after demobilization has been completed. Demobilization includes disassembly, removal, and site cleanup of equipment, temporary structures, and other facilities assembled on the site specifically for the Project. DWR assumes demobilization at the West False River barrier site would be completed by November 15, 2015. Revegetation activities would directly follow completion of demobilization activities. The optimum season for direct seeding is fall, when moisture, temperatures, and plant physiology are most favorable for establishment. If revegetation is delayed more than 60 days, irrigation and/or reseeding may be required. Delayed implementation may require temporary erosion control measures to be implemented in the interim period. If necessary after grading, all bare soil areas should be seeded with a nurse crop of sterile wheat grass to stabilize the freshly graded areas prior to seeding with the recommended mix.

Revegetation

Prior to the start of revegetation activities, DWR will coordinate with the local maintaining agency. DWR only authorizes the use of native species for the revegetation effort. Revegetation will be accomplished using a seed mix of grass and herbaceous plant species (see Table 1). DWR will approve any proposed modifications to the seed mix at least 15 days prior to revegetation implementation.

Local sources of seed shall be used to the greatest extent feasible. Plant and seed materials shall be sourced within a 100-mile radius and shall be from similar watershed conditions. DWR shall review proposals to use stock that does not originate from this area. Seed mixes shall be 99% weed free and 100% free of any prohibited and restricted noxious weeds. Seed shall be protected from wind, heat, and other conditions which could damage or impair viability, both during delivery and if temporarily stored on site prior to planting.

Prior to seeding, planting areas shall be scarified to a depth of six inches or greater, in two directions. Fertilizer shall not be applied at the time of seeding. Seed application shall be accomplished by hydroseeding.

Table 1: Proposed Upland Seed Mix

Common Name	Scientific Name	Pure Live Seed (lbs/acre)	Percent of Total Pure Live Seed Mix
blue wildrye	*Elymus glaucus*	3.0	16.67%
small fescue	*Festuca microstachys*	3.0	16.67%
California barley	*Hordeum brachyantherum californicum*	3.0	16.67%
miniature lupine	*Lupinus bicolor*	1.5	8.325%
nodding needlegrass	*Stipa cernua*	3.0	16.67%
purple needlegrass	*Stipa pulchra*	3.0	16.67%
tomcat clover	*Trifolium wildenovii*	1.5	8.325%
Total (lbs/acre)		**18**	–

Note: This seed mix has been provided without specific site condition information including agricultural suitability soil testing data. It is based on similar known locations. Variability in site conditions and unknown adverse soil conditions (e.g., high or low pH, unexpected high micronutrient levels) may preclude optimum establishment.

Source: AECOM 2015

Hydroseeding applications shall be uniformly broadcast at the prescribed application rate and shall consist of the above specified seed mix, 2000 pounds per acre of hydromulch, and 80 pounds per acre of tackifier applied as a slurry. On the same day, after hydroseeding applications, 150 pounds per acre of stabilizer shall be applied with 2,000 pounds per acre of hydromulch without seed in order to anchor the straw mulch in place. Mulch shall be mold-free, air-dry uncut straw, and certified weed free. Additional erosion control measures may be necessary to protect any adjacent waterways or wetland habitat (e.g., straw wattle adjacent to canal). Considerations of stormwater pollution prevention best management practices that may be required are not included in this memo. No watering is necessary if adequate winter rains ensue.

If you have questions or need further information, please contact DWR project manager, Jacob McQuirk, at (916) 653-9883 or Jacob.mcquirk@water.ca.gov.